



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/544,543	04/06/2000	Hidetoshi Kodama	Q58782	7511

7590 01/20/2004

Sughrue Mion Zinn Macpeak & Seas PLLC
2100 Pennsylvania Avenue NW
Washington, DC 20037-3202

EXAMINER

TRAN, LY T

ART UNIT	PAPER NUMBER
----------	--------------

2853

DATE MAILED: 01/20/2004

21

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/544,543

Applicant(s)

KODAMA ET AL.

Examiner

Ly T TRAN

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed 11/25/03.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27, 30 and 33-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10, 13-27 and 30 is/are allowed.
- 6) ☒ Claim(s) 11 and 12, 34 is/are rejected.
- 7) ☒ Claim(s) 35 and 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/25/03 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 11 recites the limitation "the secondary scanning direction" in line 13. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 12 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer (6,239,817) in view of Endo (6325,489).

With respect to claim 12, Meyer discloses a method for recording data on a recording medium comprising:

- A recording head having a dot formation element array including a plurality of dot formation elements arranged along a first direction (Fig.4B: element 27, 27)
- A platen for holding a recording medium in position opposite the recording head (Fig.4B: element 30)
- Ink is squirted while the end portion of the recording medium is situated within an area of the platen opposite to the dot formation element array, such as a portion of the ink is discard into a hole (Fig.3: element 38) locally formed in the area of the surface of the platen (element 30) to thereby record data on the recording medium without leaving a margin on the edge (Fig.7: element 148) of the recording medium.

However, Meyer fails to teach the recording head performs an interlaced recording operation for actuating one of the dot formation elements located at a position close to the end of al the dot formation elements when data are recoded on the end portion of the recording medium without leaving a margin and perform an interlaced recording operation for recording data on the recording medium by actuation of all of the dot elements when data are record in a region other than the end portion.

Endo teaches the recording head performs an interlaced recording operation such as all of the nozzles including the nozzle that close to the end of the dot formation element array is printing in every scanning (Fig.2, Column 7: line 25-35). Therefore, using the print head of Endo for performing interlaced recording into the invention of Meyer et al. which is printing without leaving a margin, at least the nozzle closes to the end of the dot formation array is operated and because all the nozzle are operate in every scan, when printing on the region other than the end portion, all of these nozzle also operated.

It would have been obvious to one having ordinary skill in the art at the time the invention was made with an interlaced recording operation as taught by Endo. The motivation of doing so is to prevent banding or the production blank areas in order to provide high quality color printing (Endo, USPN 6,325,489, Column 7: line 39-41).

Allowable Subject Matter

1. Claims 1-10, 13-27 and 30 are allowed.

The following is an examiner's statement of reasons for allowance:

- The primary reason for the allowance of claims 1 and 2 is the inclusion of the limitation of an ink jet print head comprising a platen having a first hole formed in an area of the platen opposite a downstream portion of the dot formation array with respect to the first direction wherein the first hole has a size in the first direction which is less than an entire portion of the dot formation element array. It is limitation found in each claims, as it is

claimed in the combination, that has not been found, taught, or suggested by the prior art of record which makes these claims allowable over the prior art.

- The primary reason for the allowance of claims 3-10, 27 and 30 is the inclusion of the limitation of an ink jet print head comprising a platen having a first hole formed in an area of the platen opposite a downstream portion of the dot formation array with respect to the first direction and a second hole which is formed in an area of the platen opposite an upstream portion of the dot formation element array with respect to the secondary scanning direction and which guides the ink that has been discarded outside a top end of the recording medium when data are recorded on the recording medium without leaving a margin on the top end of the recording medium. It is limitation found in each claims, as it is claimed in the combination, that has not been found, taught, or suggested by the prior art of record which makes these claims allowable over the prior art.
- The primary reason for the allowance of claims 13, 15-17, 19-26 is the inclusion of the limitation of an ink jet print head comprising a control section having a combination of a first operation mode in which a recording operation is performed by expanding recording data within a record region inside the both ends of the recording media and a second operation mode in which a recording operation is performed by expanding

the recording data within a record region outside the both ends of the recording media and inside each outer edge of associated holes in the second direction and wherein each of the holes extends in the first direction beyond areas to be opposite to both ends of the dot formation element array. It is limitation found in each claims, as it is claimed in the combination, that has not been found, taught, or suggested by the prior art of record which makes these claims allowable over the prior art.

- The primary reason for the allowance of claims 14 and 18 is the inclusion of the limitation of an ink jet print head comprising a platen having plurality of holes wherein each of the holes extends in the first direction beyond areas to be opposite to both ends of the dot formation element array. It is limitation found in each claims, as it is claimed in the combination, that has not been found, taught, or suggested by the prior art of record which makes these claims allowable over the prior art.
- The primary reason for the allowance of claims 14 and 18 is the inclusion of the limitation of an ink jet print head comprising the combination of the hole is formed in a surface of the platen and at least a portion of the surface directly opposes at least a portion of the dot formation array with respect to the secondary scanning direction.

4. Claim 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

5. Claims 35 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 35 is allowable over prior art of record because at least prior art have not been found to anticipate or teach the hole opposes less than the entire portion of the dot formation element array with respect to the secondary scanning direction.

Claim 36 is allowable over prior art of record because at least prior art have not been found to anticipate or teach at least a portion of the surface directly opposes at least a portion of the dot formation element array with respect to the secondary scanning direction.

Response to Arguments

6. Applicant's arguments filed 11/25/03 have been fully considered but they are not persuasive.

Applicant's argument that Endo does not teach the recording head performs an interlaced recording operation for actuating one of the dot formation elements located at a position close to the end of all the dot formation elements when data are recoded on the end portion of the recording medium without leaving a margin is not persuasive because Endo teaches the recording head performs an interlaced recording operation such as at least one nozzle close to the end of the dot formation element array is printing in every scanning (Fig.2, Column 7: line 25-35). Therefore, using the print head of Endo for performing interlaced recording into the invention of Meyer et al. which is

printing without leaving a margin, at least the nozzle closes to the end of the dot formation array is operated.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ly T TRAN whose telephone number is 703-308-0752. The examiner can normally be reached on M-F (7:30am-5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 703-308-4896. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0967.



January 16, 2004



Stephen D. Meier
Primary Examiner